

**ABSTRACT OF THE DISCLOSURE**

Disclosed is a node structure of an upgradeable wavelength division multiplexing system that can minimize the expense in implementing, maintaining, and upgrading the system. The node structure includes an interleaver for interleaving a plurality of optical signals received therein into a predetermined number of channels; at least one demultiplexer coupled to one of the output channels for demultiplexing the optical signals received thereto into a prescribed number of channels; at least one multiplexer for multiplexing the respective demultiplexed optical signals from the demultiplexer; and, a deinterleaver for deinterleaving the optical signals outputted from the multiplexer to be forwarded to the next node.